

Panasonic

Electronic Typewriter

MODEL NO. **RK-T33**

O/P/E/R/A/T/I/N/G
I/N/S/T/R/U/C/T/I/O/N/S



Read these instructions completely before operating this set.

*Thank you for your purchase of
the Panasonic RK-T33 Electronic
Typewriter.*

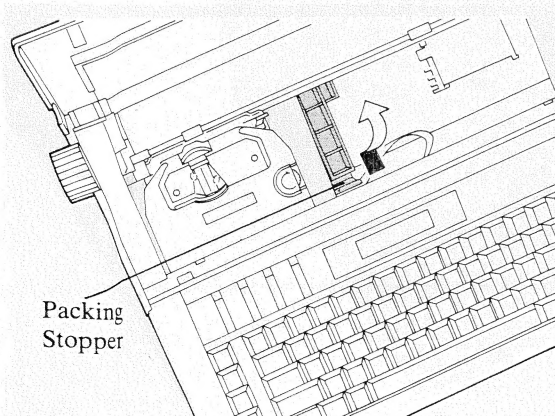
Caution

This equipment has been tested and found to comply with the limits for class B computing devices in accordance with the specifications set forth in Subpart J of Part 15 of the FCC rules. If this equipment causes interference to radio or television reception, which can be determined by turning the equipment on and off, use the equipment in another location and/or utilize an electrical outlet different from that used by the receiver.

- Use shielded cables for connection to RS-232C devices or other peripherals to ensure continued compliance with FCC emission limits.

Cushion Removal

Before using the typewriter, first open the Dust Cover. Next, open the Top Cover, push the Packing Stopper in the direction of the arrow and remove it, then remove the Cushions.



The serial number of this product may be found on the label at the right side of the bottom when the Top Cover is opened. Write down the serial number of this unit in the space provided and retain this book as a permanent record of your purchase to aid in identification in the event of theft.

MODEL NUMBER: RK-T33

SERIAL NUMBER:

The Operating Instructions for this unit are composed of the following five chapters.

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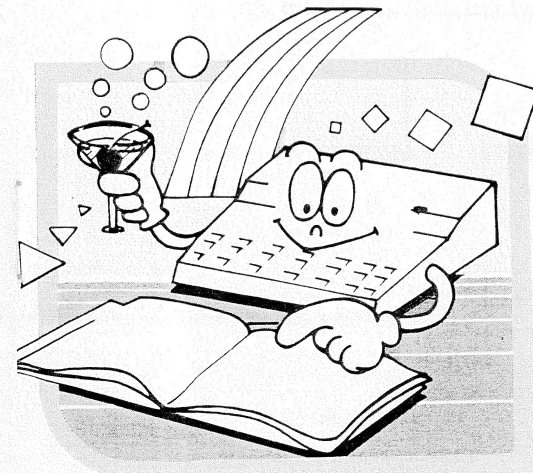
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BEFORE USING

BASIC OPERATIONS

TEXT MEMORY

PRINTER

APPENDIX

NAMES AND OPERATION OF THE PARTS

a. Names and Operation of the Main Parts

Carriage

The Ribbon Cassette, the Correction Tape and the Cupwheel Printing Element are installed on the Carriage. This mechanism moves to the left and right for printing, erasing, etc.

Top Cover

This cover must be opened to replace the Ribbon Cassette or the Correction Tape.

Platen Knob (left)

Either one of the knobs can be used to feed the paper up and down manually. By pressing the left Platen Knob inward you can rotate the Platen in small increments.

Paper Bail and Rollers

These are used to hold the paper down. Set the rollers according to the width of the paper being used.

Paper Support

Platen

Operation Mode Selector (TPWR • L/L • JUST)

Pitch Selector (10 • 12 • 15)

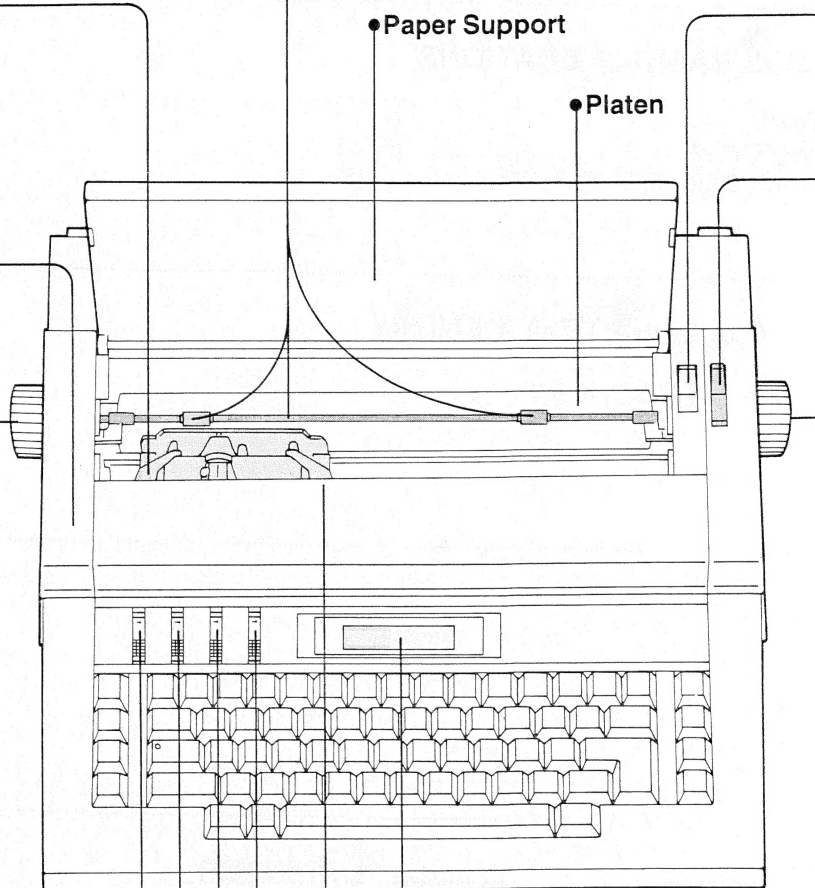
Line Spacing Selector (1 • 1½ • 2)

Keyboard Selector (KBI • KBII • EXT)

LCD Display

Pitch Scale

Scales for the three pitches of 10, 12 and 15 are shown. Use these scales for margin and tab setting.



Accessories (included)

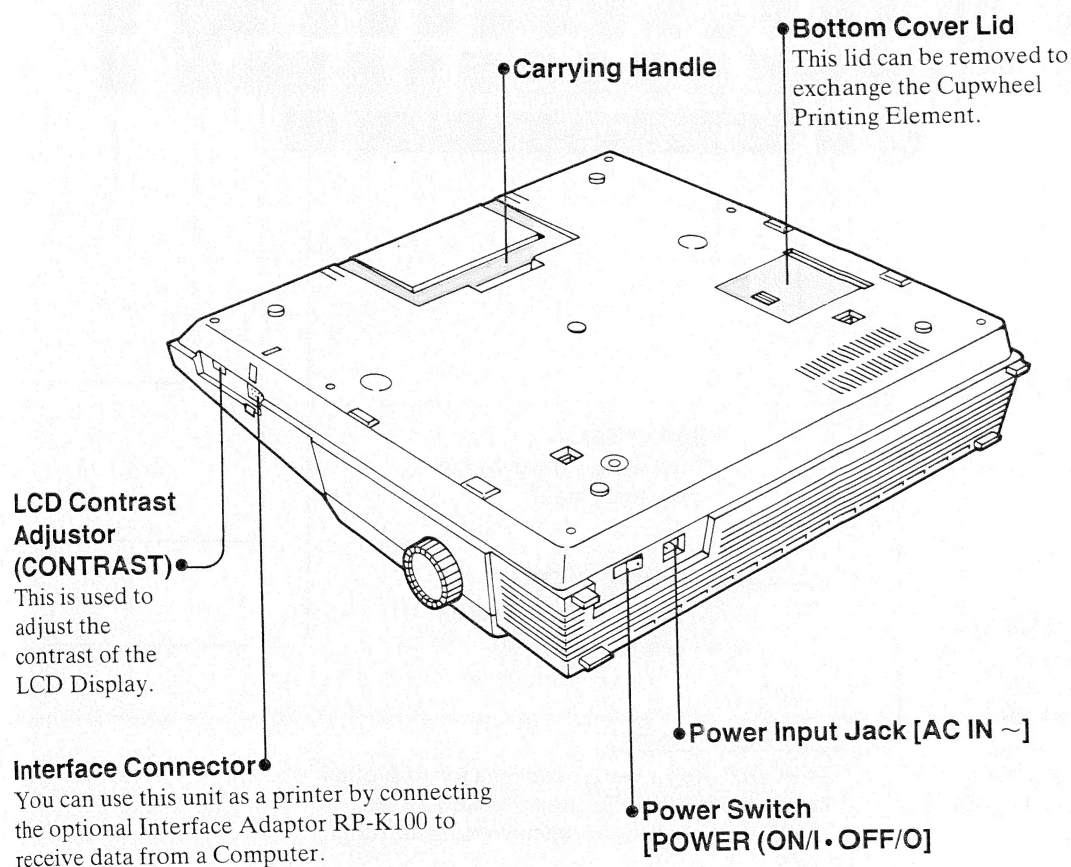
- Cupwheel Printing Element
- Correctable Film Ribbon Cassette
- Lift-off Correction Tape
- AC Power Cord
- Dust Cover

•Paper Release Lever

This lever is used to release the paper. Pull this lever towards you to adjust the paper position, and then move it back to lock the paper.

•Paper Bail Lever

When this lever is pulled towards you, the Paper Bail will move away from the Platen. This allows the paper to be easily inserted and positioned for typing.

•Platen Knob (right)

NAMES AND OPERATION OF THE PARTS

b. Names and Operation of the Function Keys

Margin Release Key (MAR REL)

The left or right margin is released temporarily.

Left Margin Set Key (L MAR)

Right Margin Set Key (R MAR)

Tab Set Key (TAB SET)

Tab Clear Key (TAB CLR)

Shift Lock Key and Shift Indicator (LOCK)

Press this key to lock the shifted condition.
Press the **SHIFT** Key to cancel the shift lock.

•Shift Indicator

This indicator lights in the shifted condition.

Shift Key (SHIFT)

When a character key is pressed while this key is being pressed, the capital letter or the symbol shown on the top part of the key will be printing.

•Tab Key (TAB)

The carriage moves to the next tab position.

Forward Key [FWD (▼)]

The cursor on the LCD Display will move one character to the right.

When the unit is in the Typewriter (TPWR) Mode, the Carriage will move one space to the right.

Back Space Key [BACK SPACE (▲)]

The carriage or the cursor on the LCD Display will move one character to the left.

•Space Bar

The carriage moves by one space to the right.

•Repeat Key (RPT)

Press to repeat the immediate preceding key operation.

•Code Key (CODE)

The **CODE** Key is used in combination with other keys to modify their functions. Make sure the **CODE** Key is held down when pressing the other key.

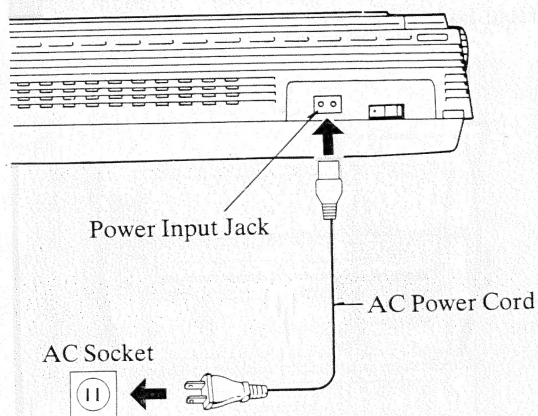
POWER 1-2 SUPPLY

Chapter 1

BEFORE USING

a. Using Household AC Power

Connect the AC Power Cord to the Power Input Jack in the unit and household AC Socket.



b. Power Switch

When the **POWER** Switch is set to "ON", the carriage moves to the left margin which was last set and the unit is ready for typing.

c. Memory Back-up Function

The following will remain memorized even after the **POWER** Switch has been set to "OFF":

- Stored Text
- Margins
- Tabs

The built-in lithium battery that is used to store these functions can be used for about 15 years.

•Delete Key (X)

This key is used to delete printed characters or characters on the LCD Display.

•Text IN/OUT Key (TEXT IN/OUT)

This key is used for entering into the Text Memory Mode or for exiting from the Text Memory Mode.

•Print ON/OFF Key (PRINT ON/OFF)

This key is used to start or stop the printout of the text stored in the Text Memory.

•Express Back Space Key (EXP)

This key is used to return the carriage to the left margin without a line feed.

•Relocation Key (RELOC)

The carriage moves to the position after the last printed character on the current line.

•Return Key (RETURN)

The carriage moves to the left margin position of the next line.

•Shift Key (SHIFT)

•Quick Erase Key (QUICK ERASE)

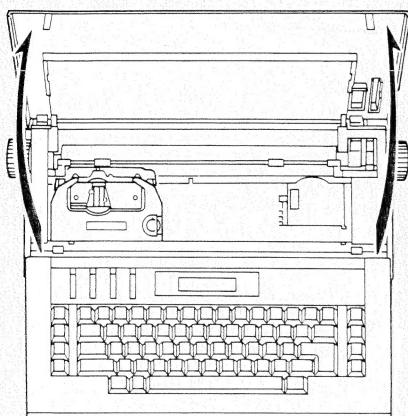
This key is used to automatically erase one word at a time.

REPLACING THE CUPWHEEL™

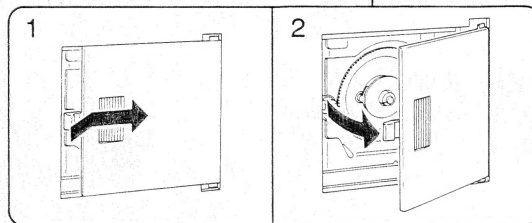
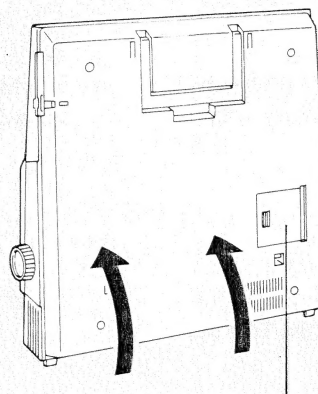
1-3 PRINTING ELEMENT

1 Set the **POWER** Switch to the "OFF" position. Remove the AC Power Cord from the Power Input Jack.

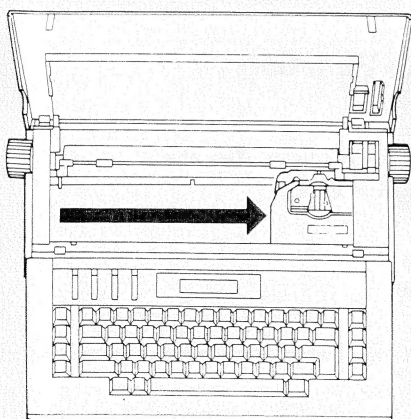
2 Hold both sides of the Top Cover and open it.



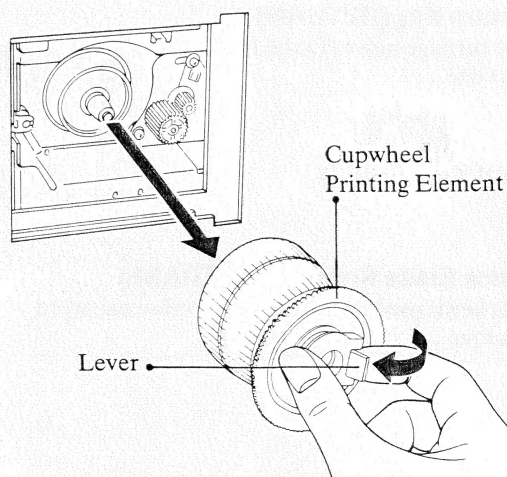
4 Close the Top Cover again and place the Typewriter on its back. Remove the Bottom Cover Lid by sliding it to the right side.



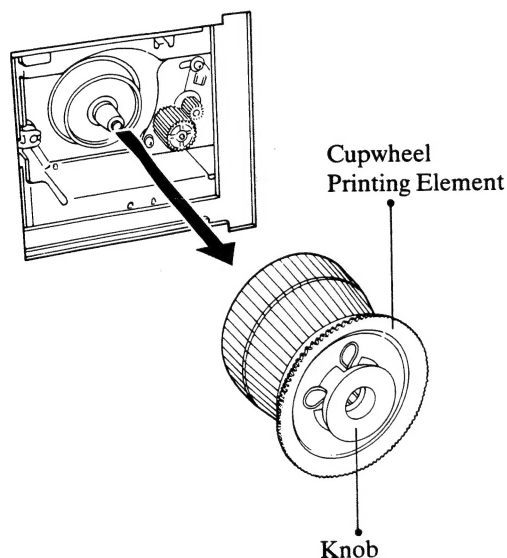
3 Using your hand, gently move the Carriage to the right side.



5 Grasp the Lever of the Cupwheel Printing Element between your fingers to release the lock. Then pull it directly out as shown in the figure.

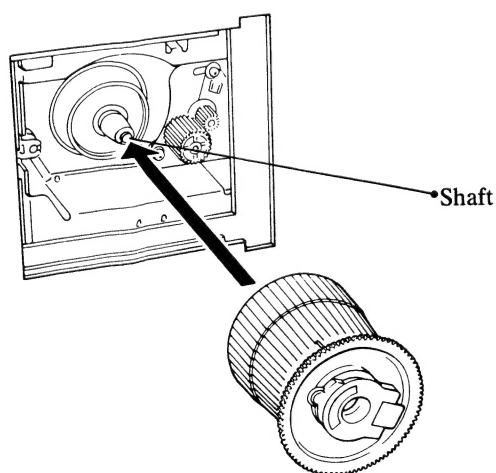


- If a Cupwheel Printing Element without the Lever is used, grasp its Knob and pull it directly out.

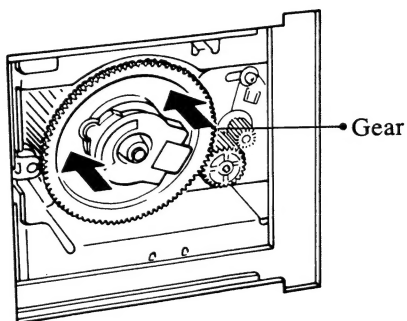


- 6 Insert another Cupwheel Printing Element so that the shaft enters the hole in the center of the element.

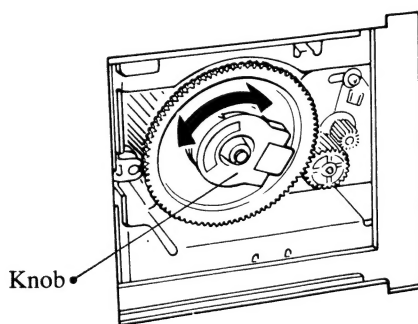
- Insert the element so that it will not get caught by the Ribbon.



- 7 Confirm that the gear is engaged and then push in until a clicking sound is heard.



- 8 Hold the Knob of the Cupwheel Printing Element and turn it slightly to check that it rotates freely.



- 9 Slide the Bottom Cover Lid to its closed position.

- 10 Before setting the **POWER** Switch to "ON", confirm that the Cupwheel Printing Element has not been caught by the Ribbon. If the Element has been caught, remove the Ribbon Cassette and install it again.

Refer to pages 10 and 11.

- Set the Pitch Selector in accordance with the type of Cupwheel Printing Element.

If the power is switched on while the Cupwheel Printing Element is incorrectly installed, the buzzer will sound.

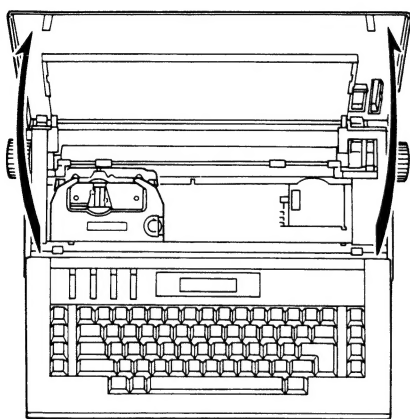
In this case, set the **POWER** Switch to "OFF" and install the Cupwheel Printing Element correctly.

REPLACING THE RIBBON

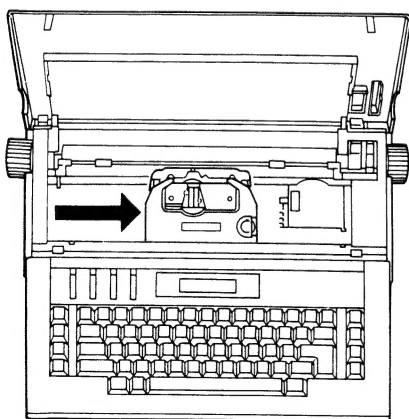
1-4 CASSETTE

- 1 Set the **POWER** Switch to the "OFF" position, and remove the AC Power Cord from the Power Input Jack.

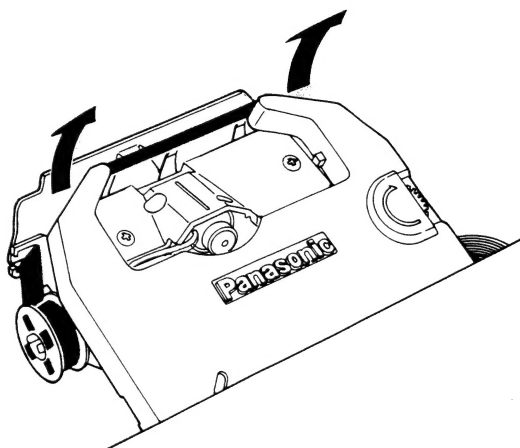
- 2 Hold both sides of the Top Cover and open it.



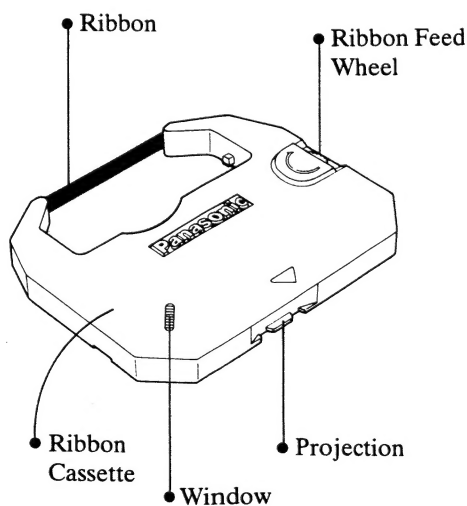
- 3 Using your hand, gently move the Carriage to the center of the Platen.



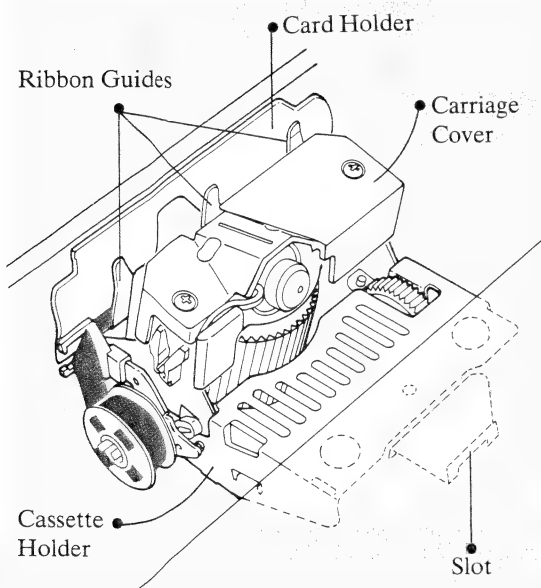
- 4 Hold the old Ribbon Cassette with both hands and remove it by first raising the front end and then lifting the entire Ribbon Cassette.



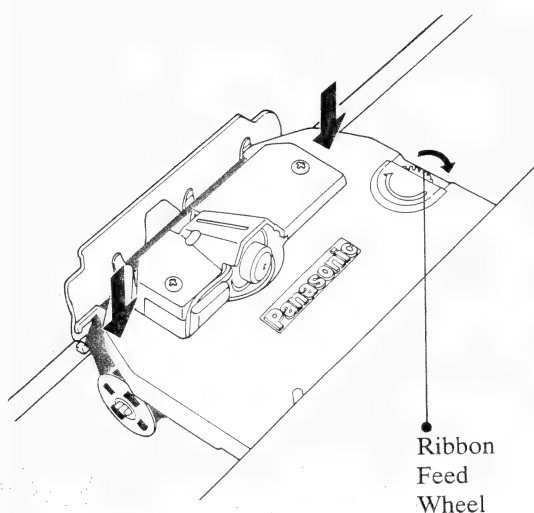
- 5 Turn the Ribbon Feed Wheel (on the new Ribbon Cassette) clockwise to tighten the Ribbon.



- 6 Position the new Ribbon Cassette over the Cassette Holder so that the Window (through which the ribbon can be seen) is on the top, then place the Projection on the rear of the cassette into the Slot at the front of the Cassette Holder.



- 7 Set the Ribbon between the Carriage Cover and the Ribbon Guides and then gently press the front of the cassette with both hands until the cassette is locked. Turn the Ribbon Feed Wheel clockwise until a clicking sound is heard.
- With a new ribbon, turn the Ribbon Feed Wheel until the black ribbon can be seen.



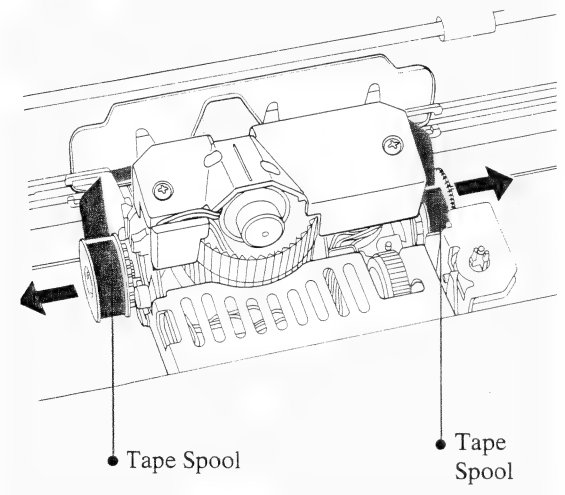
- 8 Confirm that there is no slack in the Ribbon. If there is slack, turn the Ribbon Feed Wheel clockwise to remove it.

Do not apply excessive force to or bend the flat cable coming out from the Carriage.

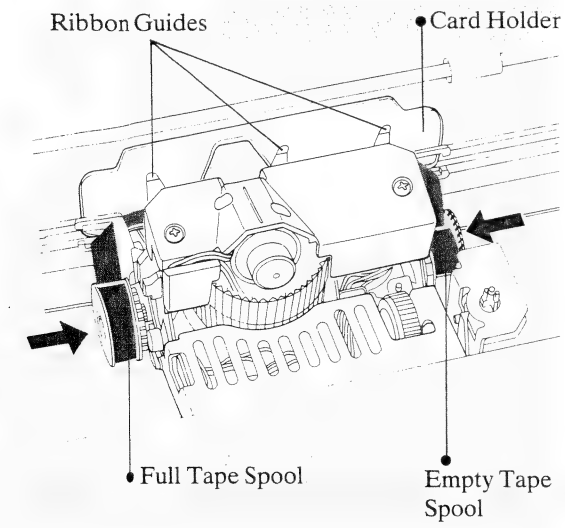
REPLACING THE 1-5 CORRECTION TAPE

1 Remove the Ribbon Cassette by the steps 1~4 of "REPLACING THE RIBBON CASSETTE".

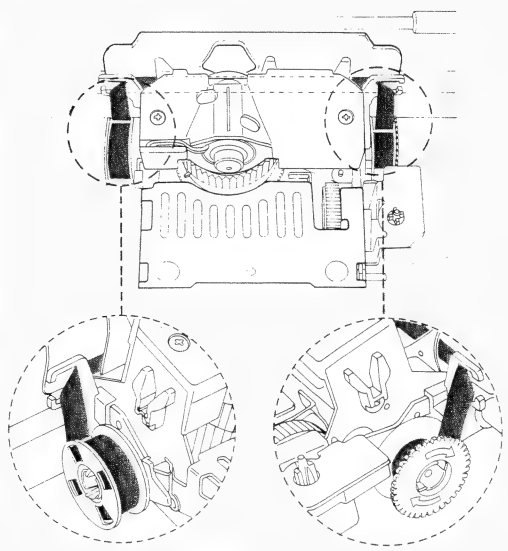
2 Remove the used Correction Tape by pulling the Tape Spools outwards on both sides.



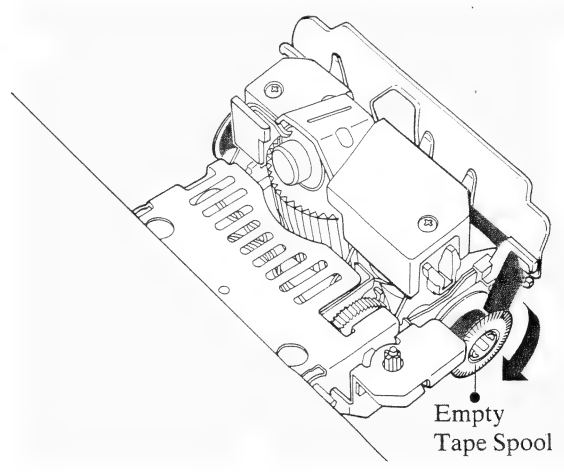
3 Place the new Correction Tape with the Full Spool on the left side, and then pass the tape between the Card Holder and the Ribbon Guides.



•Make sure that the inner surface of the tape on the spool faces toward the Platen.



4 Turn the right spool clockwise until the white tape appears at the center of the Card Holder.



5 Install the Ribbon Cassette properly. (Follow the steps 6 through 8 of "REPLACING THE RIBBON CASSETTE".)

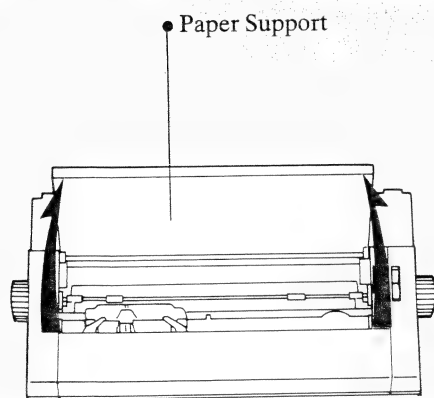
Always set the **POWER** Switch to "OFF" before exchanging the Correction Tape.
Do not touch the Carriage while the power is "ON".

1-6 INSERTING THE PAPER

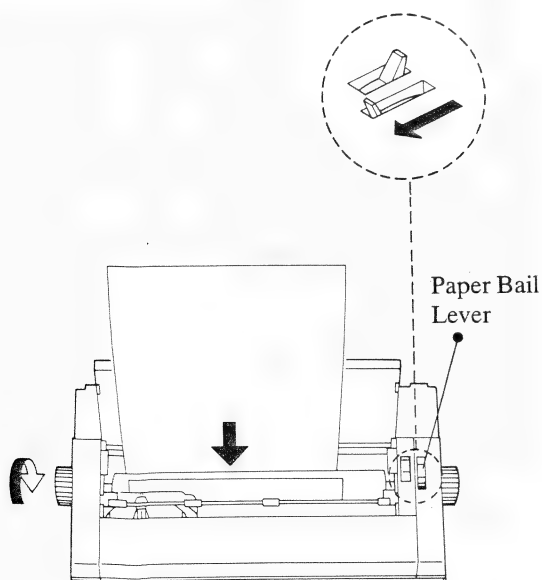
Chapter 1

a. Paper Insertion

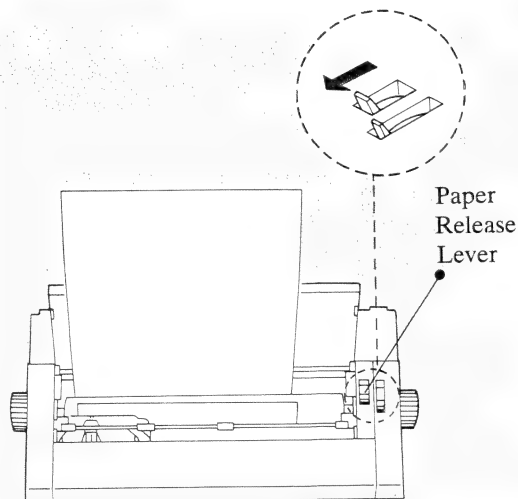
1 Raise the Paper Support.



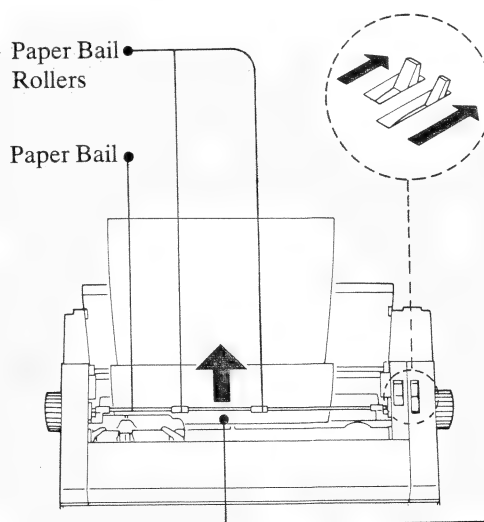
2 Insert the paper straight under the back of the Platen. Pull the Paper Bail Lever towards you. While keeping the left edge of the paper in line with the marker on the Paper Support. Turn the Platen Knobs until the paper appears at the front of the Platen.



3 Feed the paper underneath the Paper Bail, pull the Paper Release Lever, and adjust the paper.



4 Return the Paper Release Lever and Paper Bail Lever to their original positions and then position the Paper Bail Rollers to hold down the paper.



Proper printing and correction will not be possible if there is any slack in the paper. Hold the paper by the top edges and pull up to remove any slack.

BEFORE USING

2-1 TYPING

a. Procedure for Typing

- 1 Verify that the Cupwheel Printing Element, Ribbon Cassette and Correction Tape are correctly installed.

Refer to pages 8 to 12.

- 2 Connect the AC Power Cord to the Power Input Jack in the unit and household AC Socket.

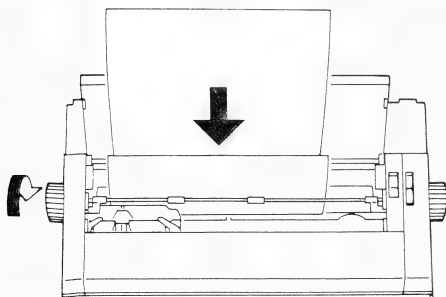
Refer to page 7.

- 3 Set the **POWER** Switch to the "ON" position. The Carriage will move to the left margin that was last set.

Refer to page 7.

- 4 Insert the paper under the back of the Platen and rotate the Platen Knob to feed the paper to the desired position.

Refer to page 13.

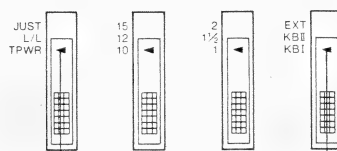


Typing may now proceed.

Verify that the Operation Mode Selector is in the "TPWR" position.

- The Selectors are on the left side of the LCD Display.

TYPING MODE



Operation Mode Selector

Keyboard Selector

If the Keyboard Selector is in the "EXT" position, set it to the "KBI" or "KBII" position.

- Try typing the following word:

typewriter

- The characters have now appeared on the paper as:

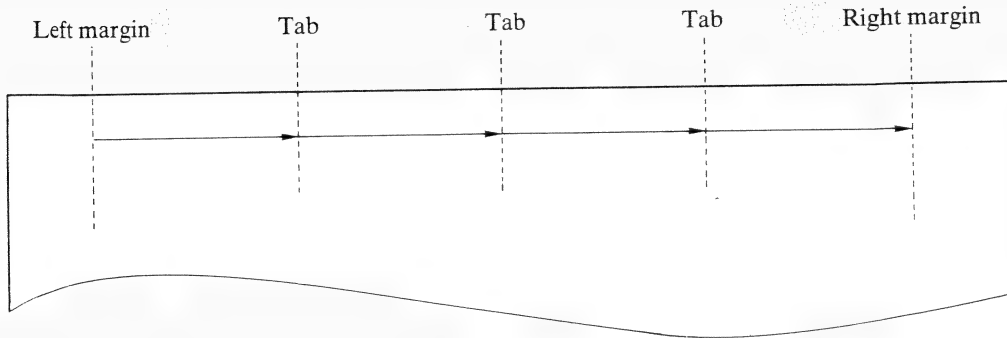
typewriter

The Typing of one character at a time onto the paper is called the Typewriter (TPWR) Mode.

You now know how to proceed with simple typing. Read through the following instructions in order to make full use of the unit's functions.

b. Margin and Tab Settings

TPWR Mode



BASIC OPERATIONS

Space Bar

BACK
SPACE
▲FWD
▼

- 1 Press the **Space Bar**, the **BACK SPACE** Key or the **FWD** Key to move the Carriage to the desired left margin.

- 5 Repeat steps 3 and 4 to set other desired tab positions.
• Up to 16 tabs can be set in one line.

L MAR

- 2 Press the **L MAR** Key to set the left margin. The previous left margin is automatically cleared.

Space Bar

FWD
▼

- 6 Press the **Space Bar** or the **FWD** Key to move the Carriage to the desired right margin.

Space Bar

BACK
SPACE
▲FWD
▼

- 3 Press the **Space Bar**, the **BACK SPACE** Key or the **FWD** Key to move the Carriage to the desired tab position.

R MAR

- 7 Press the **R MAR** Key to set the right margin. The previous right margin is automatically cleared.

TAB
SET

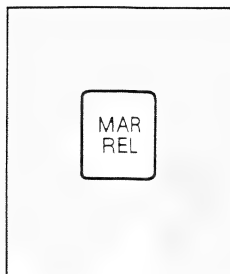
- 4 Press the **TAB SET** Key to set the first tab.

This completes the settings for the left and right margins and for the tabs. To set the left and right margins only, skip steps 3, 4 and 5 and proceed. Press the **RETURN** Key to move the Carriage to the left margin on the next line and begin typing.

TYPING

c. Margin Release

TPWR Mode



To set the left (or right) margin beyond the currently set left (or right) margin or to type characters beyond the right margin, press the **MAR REL** Key with the Carriage positioned at the margin in question.

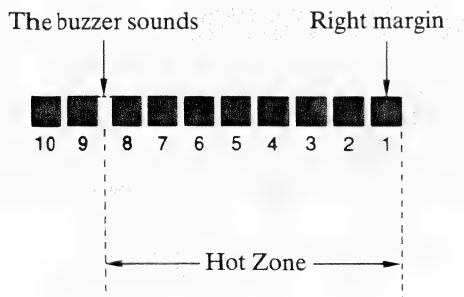
The margin is temporarily released and the Carriage can be moved, or typing can be performed, beyond the margin. At this time, if you wish to set the left (or right) margin, press the **L MAR** Key (or **R MAR** Key) to set the margin.

When the Carriage reaches the right margin, the buzzer sounds and the keys are locked. The keys can be released by following either of the steps below:

- Press the **RETURN** Key to move the Carriage to the left margin on the next line.
- Press the **MAR REL** Key to temporarily release the margin and continue typing.

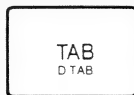
d. Hot Zone

The Hot Zone is the area that starts with the sound of the buzzer and ends with the right margin. When the Carriage enters the Hot Zone, the buzzer sounds to indicate that only another 8 characters can be typed on that line. The same applies for the L/L and JUST Mode.



e. Tab Clearing

TPWR Mode



- 1 Press the **TAB** Key to move the Carriage to the tab position which is to be cleared.



- 2 The tab is cleared when the **TAB CLR** Key is pressed.

f. Clearing All Tabs

TPWR Mode



+



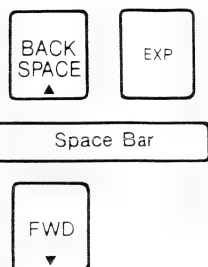
Press the **TAB CLR** Key while pressing the **CODE** Key to clear all the tabs.

2-2 CORRECTION

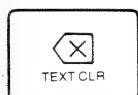
a. Automatic Correction

TPWR Mode

This unit has a one line correction memory, so you can delete the characters on the current line automatically with one simple operation.



- 1 Use the **BACK SPACE** Key, the **EXP** Key, the **FWD** Key or the **Space Bar** to move the Carriage to the position of the character to be corrected.



- 2 Press the **X** Key. The character will be deleted.



- 3 At this time, to continue automatic correction press the **RPT** Key. This will cause the previously printed characters on the line to be deleted one at a time until the **RPT** Key is released.

- 4 Type the correct character.



- 5 When the **RELOC** Key is pressed, the Carriage returns to the end of the line and typing can be continued.

- Directly after printing a character at the end of the line, the Carriage will move back and the character will be deleted automatically when the **X** Key is pressed.
- Automatic Correction is not possible after the **RETURN** Key has been pressed. In this case, Manual Correction must be performed.
- When several characters have been printed super-imposed, only the character printed last will be deleted automatically.

Correction Tape

Two types of tape can be used for correction.

•Lift-off Correction Tape

This type of correction tape is used together with correctable film ribbon.

•Cover-up Correction Tape

This tape is used together with fabric ribbon.



CORRECTION

b. Quick Erase

The QUICK ERASE feature allows you to correct one word at a time. Like Automatic Correction, this feature works only in the correction memory.



- 1 Using the **BACK SPACE** Key or **FWD** Key, move the Carriage or cursor to the last character of the word to be erased.

- If you have pressed the **Space Bar** after typing an incorrect word, make sure to press the **BACK SPACE** Key, before pressing the **QUICK ERASE** Key.



- 2 Press the **QUICK ERASE** Key.
The word will be erased.

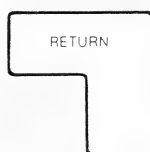
- 3 Type in the correct word.

By pressing the **QUICK ERASE** Key when the Carriage or cursor is in the middle of a word, the characters to the left of the current position will be corrected.

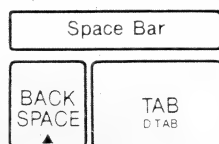
c. Manual Correction

TPWR Mode

When an error is noticed after the **RETURN** Key has been pressed, Manual Correction must be used to delete error.



- 1 Since the contents of the correction memory are cleared when the **RETURN** Key is pressed, turn the platen to position the Carriage on the line where the correction is to be made.




- 2 Use the **Space Bar**, the **BACK SPACE** Key, the **TAB** Key, or the **CODE** Key and **H** Key (Half Space) to move the Carriage to the position of the character to be corrected.



+



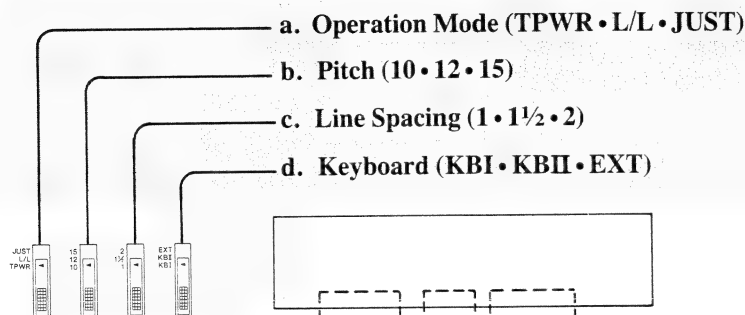
- 3 Press the  Key and then the key of the character to be deleted, the respective character will be deleted.

- 4 Type the correct character.

- 5 Move the Carriage to the position of the last character which was typed to continue typing.

2-3 DESCRIPTION OF FUNCTIONS

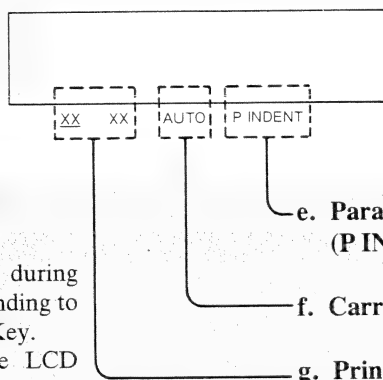
Selector



Indicator

These functions can be set or released during typing simply by pressing the key corresponding to the function while pressing the **CODE** Key.

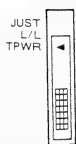
- When the "▼" mark appears on the LCD Display, it indicates that the mode has been set.



Decimal Tab, Centering, Right Margin Flush and Half Space functions are also available.

Refer to pages 24 to 26.

a. Operation Mode Selector



The printing method is selected.

Typewriter (TPWR) Mode

The characters entered will be printed immediately. Margin and tab settings are executed in this mode. Set the margins and tabs in this mode.

Line by Line (L/L) Printing Mode

When character keys are pressed, the respective characters appear on the LCD Display and can be edited (inserted, deleted, corrected) on the display before they are printed.

When the **RETURN** Key or **TAB** Key is pressed, the characters in the line are printed.

DESCRIPTION OF
FUNCTIONS

Justify (JUST) Printing Mode

This mode will print each line so that the last character is printed on the right margin. The typed characters will first appear on the LCD Display (at this time the characters can be edited before they are printed). When further input will exceed the right margin the characters will be printed on the paper. For this reason, you need only press the **RETURN** Key when you wish to end the paragraph. If the **RETURN** Key is pressed, the characters typed up to that point will be printed without being justified.

- Justified printing will start only when the cursor is at the last character position on a line.
- In the Justify Printing Mode, the position of the Automatic Carriage Return Mode is irrelevant.

• LCD Display

Typewriter Mode

TPWR MODE

Line by Line Printing Mode

L/L MODE

Justify Printing Mode

JUST MODE

• Editing on the LCD Display
(inserting, deleting, correcting)

Follow the explanation below to change "Typewr_lter" to "Typewriter".

1 Type T y p e w r
l t e r

Typewriter

Cursor

BACK
SPACE

2 Press the **BACK SPACE** Key four times to move the cursor to below the "l".

Typewriter

TEXT CLR

3 Press the **TEXT CLR** Key to delete the "l".

Typewriter

FWD

4 Press the **FWD** Key to move the cursor to below the "t".

Typewriter

I

5 Press the **I** Key to insert the "i".

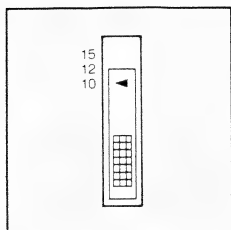
Typewriter

RELOC

6 When the **RELOC** Key is pressed, the cursor moves to the position after the character that was last typed.

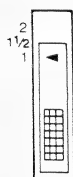
Typewriter

If the operation is interrupted and/or the buzzer sounds continuously turn the unit off and then on. If the unit does not return to normal operation and/or the buzzer still sounds check to see if the Ribbon Cassette or the Correction Tape has reached its end.

b. Pitch Selector

Set according to the pitch of the Cupwheel Printing Element being used.

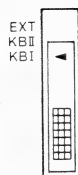
- 10 10 characters per inch (2.54 cm) can be printed.
The maximum number of characters that can be printed on a line is 101.
- 12 12 characters per inch (2.54 cm) can be printed.
This maximum number of characters that can be printed on a line is 121.
- 15 15 characters per inch (2.54 cm) can be printed.
This maximum number of characters that can be printed on a line is 151.

c. Line Spacing Selector

This selects the amount of paper that is fed each time the **RETURN** Key is pressed.

- 1 Paper is fed by one line.
- 1 1/2 Paper is fed by one and a half lines.
- 2 Paper is fed by two lines.

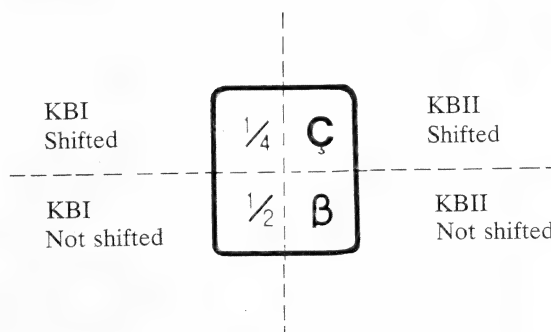
•When the Platen Knob is rotated manually, one click advances the paper one half of a line.

d. Keyboard Selector

Between two and four characters and symbols are contained in each key. The keyboard mode is thus selected to differentiate between these characters and symbols.

KBI The characters and symbols on the left side of the key can be typed.

KBII The characters and symbols on the right side of the key can be typed.



EXT This function is used when print-out data is received from a computer using the Interface Adaptor RP-K100, which is obtained separately.

•Combinations with accent symbols (dead keys)
The following combinations are possible.

Since the five accent symbols (¨, ´, `) are used together with other characters, the carriage does not move after these symbols are printed.

äëïöü	ÄËÏÖÜ
áéíóú	ÁÉÍÓÚ
àèìòù	ÀÈÌÒÙ
âêîôû	ÂÊÎÔÛ
ãõñ	ÃÕÑ

Repeat Functions

The following keys have a repeat function when they are continuously pressed.

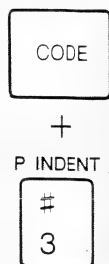
- Space Bar
- BACK SPACE Key
- FWD Key
- RETURN Key

DESCRIPTION OF FUNCTIONS

e. Paragraph Indent

This function is used when sentences are to be typed temporarily indented to the right.

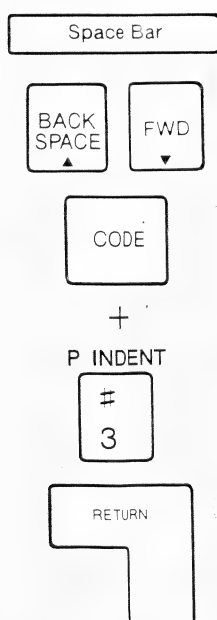
•Setting



Press the **3** Key while pressing the **CODE** Key.
When pressed, the “▼” mark on the LCD Display appears and paragraph indent is set. When pressed again, the “▼” mark disappears and paragraph indent is released. Press the **RETURN** Key to return to the original left margin.

▼
P INDENT ... Paragraph Indent setting

•Operation



1 Move the Carriage to the position where the indent is to be set by using the **Space Bar**, **FWD** Key or **BACK SPACE** Key.

2 Press the **3** Key while pressing the **CODE** Key. The present position of the Carriage is set as the temporary left margin.

3 Type the characters.

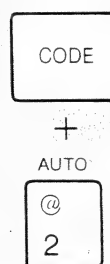
4 When the **RETURN** Key is pressed, the Carriage moves to the indent position on the next line. Continue to type.

- The Paragraph Indent Mode does not function outside the left or right margin.
- When the margin is reset, the Paragraph Indent Mode will be cancelled.

f. Carriage Return Mode

This function selects whether the Carriage return is made automatically or manually in the Hot Zone.

•Setting



Press the **2** Key while pressing the **CODE** Key.
When pressed, the “▼” mark on the LCD Display appears and Automatic Carriage Return Mode is set. When pressed again, the “▼” mark disappears and the unit returns to the Manual Carriage Return Mode.

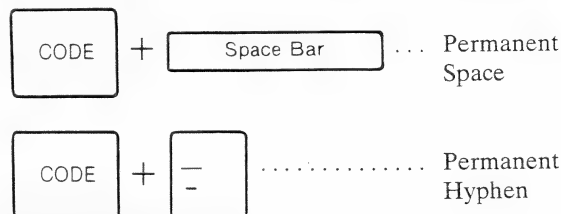
▼
AUTO Automatic Carriage Return setting

- When a space or hyphen is entered in the Hot Zone, the carriage automatically moves to the left margin or paragraph indent position on the next line.
- When in the Justify Printing Mode, the position of the Automatic Carriage Return Mode is irrelevant.
- This operates as Auto Line Feed Selector when using the unit as a printer.

Refer to page 33.

Permanent Hyphen and Space

When in the Automatic Carriage Return Mode, this function allows typing to be continued without the Carriage return in the Hot Zone.



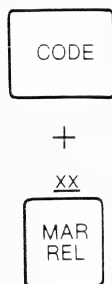
- A Permanent Space is indicated as “ ” on the LCD Display. (When editing on the LCD.)

g. Printing Mode

Underlined Printing and Bold Printing can be set.

Underlined Printing

•Setting



Press the **MAR REL** Key while pressing the **CODE** Key.

When these keys are pressed, the “▼” mark on the LCD Display appears and the Underlined Printing Mode is set.

When pressed again, the “▼” mark disappears and characters are printed without underlining.

▼
XX Underlined Printing setting

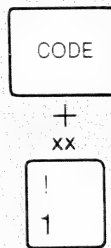
•Symbols on the LCD Display

..... Underlined Printing Mode start

..... Underlined Printing Mode finish

Bold Printing

•Setting



Press the **1** Key while pressing the **CODE** Key.

When pressed, the “▼” mark on the LCD Display appears and the Bold Printing Mode is set.

When pressed again, the “▼” mark disappears and the unit returns to ordinary printing.

▼
XX Bold Printing setting

•Symbols on the LCD Display

..... Bold Printing Mode start

..... Bold Printing Mode finish

DESCRIPTION OF FUNCTIONS

h. Decimal Tab

When the **TAB** Key is pressed while pressing the **CODE** Key, the decimal points can be aligned at the set tab position. The decimal tab function can be used not only with numbers but also with symbols.

•Operation

1 First, set a tab at the position where the decimal point is to be printed.

2 Press the **RETURN** Key, **EXP** Key, or **BACK SPACE** Key to return the Carriage.

Press the **TAB** Key while pressing the **CODE** Key. This will move the carriage to the position where the decimal point will be printed.

The following will appear on the LCD Display to indicate the unit is waiting for input.

DECIMAL TAB

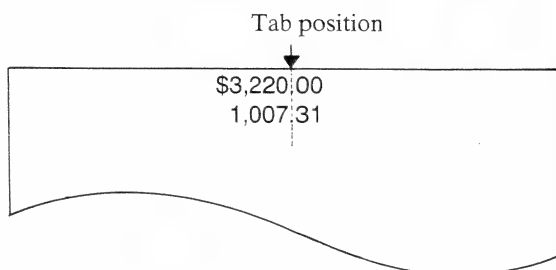
3 Enter the integral part of the number. The entered number is displayed on the LCD Display.

4 When the decimal point (period) is entered, printing will be executed so that the decimal point is printed at the tab position.

5 Type the decimal portion of your input.

Repeat the above steps (2 to 5) to type lists of statistics.

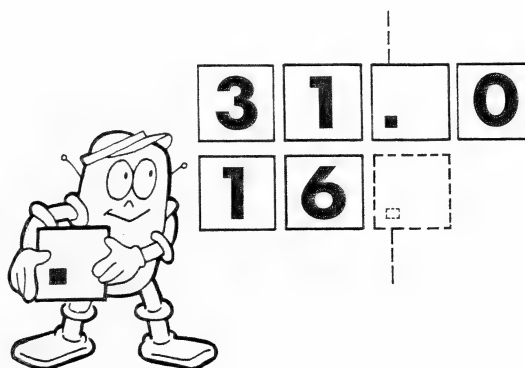
Example:



•When the number is only an integral part and there is no decimal point, use the **TAB** Key, the **RETURN** Key, or the **TAB** Key and **CODE** Key simultaneously for printing.

•When a large number of characters is to be entered and any further entry will go beyond the left margin or will be superimposed over already printed characters, the buzzer sounds and character input is no longer accepted.

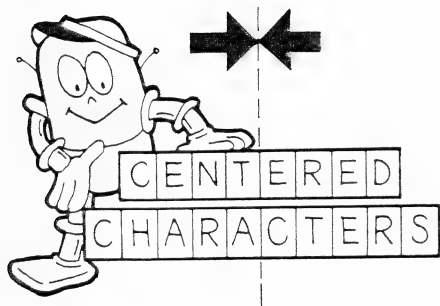
•To cancel the Decimal Tab Mode, press the Key and then press the **RPT** Key to delete all the entered characters until the buzzer sounds. Then press the Key again.



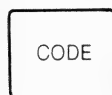
i. Centering

Centering is performed as indicated below, depending on the Carriage position.

- When the Carriage is at the left margin, centering is performed between the left and right margins.
- When the Carriage is at a paragraph indent position, centering is performed between that position and the right margin.
- When the Carriage is on a tab, centering is performed between that tab and the next tab.
- When the Carriage is on the last tab, centering is performed between that tab and the right margin.



•Operation



+



- 1 Press the **C** Key while pressing the **CODE** Key. The Carriage moves to the centering position and the following appears on the LCD Display.

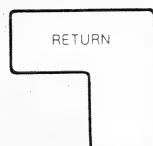
- When centering is between the margins:

L-R CENTERING

- When centering is between tabs:

TAB CENTERING



- 2 Enter the words or sentences to be centered.



- 3 When the **RETURN** Key is pressed, the typed characters are printed. The Carriage returns to the left margin on the next line.

- When a line feed is not desired, press the **TAB** Key to move the Carriage to the next tab or to the right margin.

- When you try to enter a large number of characters and any further entry will go beyond the tabs or margins, or will be superimposed over already printed characters, the buzzer will sound and character input is no longer accepted.

- To cancel the Centering Mode, press the  Key and then press the **RPT** Key to delete all the entered characters until the buzzer sounds. Then press the  Key again.
- Centering can not be performed while in the Text Mode.

DESCRIPTION OF FUNCTIONS

Chapter 2

j. Right Margin Flush

This function prints each line so that the last character is printed on the right margin.

•Operation



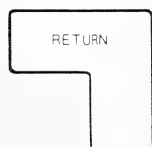
+



- 1 Press the **R** Key while pressing the **CODE** Key. The Carriage moves to the right margin and the following appears on the LCD Display:

R-MARGIN FLUSH

- 2 Enter the words or sentences to be printed.



- 3 When the **RETURN** Key is pressed, the characters are printed with the last character on the right margin. The Carriage then moves to the left margin on the next line.

- When you try to enter a large number of characters and any further entry will go beyond left margin, or will be superimposed over already printed characters, the buzzer will sound and character input is no longer accepted.
- To cancel the Right Margin Flush Mode, press the **⌫** Key and then press the **RPT** Key to delete all the entered characters until the buzzer sounds. Then press the **⌫** Key again.
- Right Margin Flush can not be performed while in the Text Memory Mode.

k. Half Space

TPWR Mode

The Half Space is used to insert a character into a word when you have already typed past it.

For example if you have typed "The quick bron fox jumps" and you wish to insert "w" into "bron", you would use the following procedure.

•Operation

- 1 Back space and erase the incorrect word (bron).



- 2 Press the **BACK SPACE** Key once.



+



- 3 Press the **H** Key while pressing the **CODE** Key. As a result the Carriage will move one half space to the right.

- 4 Type the correct word (brown).

3 TEXT MEMORY

Chapter 3

a. How to Enter Text

- 1 Set the left and right margins, tabs and printing pitch. These margins and printing pitch are stored in the memory.

If text has already been entered in the designated file, the following message appears for about a second:

SELECT MARGIN

- The messages on the LCD Display appear alternately:

1 : CURRENT

2 : STORED

CURRENT:

The text is both displayed and printed with the margins which were set upon entry into the Text Memory Mode. Printing starts from the Carriage position.

STORED:

The text is both displayed and printed with the margins which were stored when the text was entered in the Text Memory. Printing starts from the left margin stored in the Text Memory. When the Carriage is not at the left margin, it moves automatically to the left margin.

TEXT MEMORY

- 2 Press the **TEXT IN/OUT** Key. The following message is indicated for about a second on the LCD display.

TEXT MODE

- The LCD Display message then changes to:

TEXT # ? [1-20]

- 3 Input a number (between 1 and 20). For example, to input phrase number 20, press the **2** Key followed by the **0** Key. The following will appear on the LCD Display.

TEXT # 20 [1-20]

- 4 Press the **RETURN** Key. If there is no text in the designated file, the following appears and you can enter the text. (Ex. you select file 20)

20♦_

- 5 Press the **1** or **2** Key to select the margins.

1 Key CURRENT

2 Key STORED

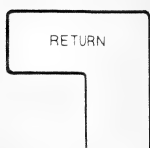
The stored text will be displayed.

TEXT MEMORY

b. How to Print Text

- 6 Enter the text without taking note of the margins. The text appears on the LCD Display and thus can be checked while it is entered. If the right margin is exceeded, the Word-wrap Function automatically moves the last word to the next line.

• Press the **RETURN** Key only when required at the end of a paragraph. The return mark “↵” will then appear on the LCD Display.



Functions Stored in the Text Memory

- **Margins** The present margin settings will be stored in the Text Memory.
- **Pitch** The present pitch settings will be stored in the Text Memory.
- **Tabs** The space positions will be stored in the Text Memory as permanent space positions.
- **Bold**
- **Underlined** Can be set freely.

Exiting from the Text Memory Mode

Press the **TEXT IN/OUT** Key when text is not to be printed in the Text Memory Mode. The following message appears on the LCD Display and you can exit from the Text Memory Mode.



TEXT MODE END

- 1 Set the line spacing and pitch to the desired position.

- 2 When the stored margins are not to be used, set the margins and carriage position.
- When you wish to perform justified printing of a text, set the Operation Mode Selector to “JUST”.

- 3 Press the **TEXT IN/OUT** Key and enter the file number. Then, press the **RETURN** Key and select the margin. Immediately after the desired file has been selected, the cursor will be located at the beginning of the text. To start printing from an intermediate point in the text, move the cursor to the desired position.



- 4 Press the **PRINT ON/OFF** Key. Printing starts from the cursor position. (To print from any point in the text, move the cursor to that point beforehand.)



TEXT PRINTING

PRINT
ON/OFF

5 To stop printing temporarily, press the **PRINT ON/OFF** Key again.

Printing then stops at the beginning of the next line.

- The **PRINT ON/OFF** Key is used to start, temporarily halt and to resume printing.

- After printing has been temporarily stopped, you can type additional words on the paper but these words will not be stored in the Text Memory.

- While the unit is not printing, none of the indications "TPWR MODE", "LL MODE" or "JUST MODE" will appear on the LCD Display.

6 Upon completion of printing, an exit is automatically made from the Text Memory Mode.

- Press the **TEXT IN/OUT** Key to exit from the Text Memory Mode while printing has been temporarily stopped.

TEXT
IN/OUT

Stop Codes

This unit will allow you to enter and instruct it to stop printing at a particular point so that you may insert variables within the body of the text.

CODE

+

P

STOP

During text entry, input the Stop Code by pressing the **P** Key while pressing the **CODE** Key.

As a result when the text is printed out, printing will stop at that point.

The following message appears on the LCD Display.

S STOP CODE

Type the variable information.

PRINT
ON/OFF

To resume printing press the **PRINT ON/OFF** Key. The variable information will not become part of the stored text.

TEXT MEMORY

•Symbols on the LCD Display

S Stop Code

TEXT MEMORY

c. How to Edit Text



- 1 Press the **TEXT IN/OUT** Key and enter the file number. Then, press the **RETURN** Key and select the margins.

- 2 Proceed with the editing.



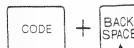
.... The cursor moves one character at a time to the right. When it reaches the end of the line it moves automatically to the beginning of the next line.



.... The cursor moves one character at a time to the left. When it reaches the beginning of the line it moves automatically to the end of the previous line.



.... The cursor moves to the beginning of the next line.



.... The cursor moves to the beginning of the previous line.



.... The cursor moves to the beginning of the text.



.... The cursor moves to the end of the text.



.... The character above the cursor is deleted.

Character keys

..... When a character key is pressed, the character is inserted automatically to the left of the cursor.



- 3 Upon completion of editing, press the **TEXT IN/OUT** Key to exit from the Text Memory Mode.

TEXT MODE END

d. Word Search

You can search for specific words in the Text Memory with ease.



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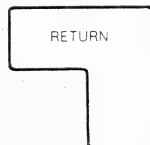


- 1 Press the **S** Key while pressing the **CODE** Key when editing text. The following message will appear on the LCD Display.

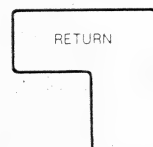
S.WD=_



+



- 2 Enter the word or phrase to be searched. When searching for a phrase that includes the return mark, press the **RETURN** Key while pressing the **CODE** Key to insert the return mark.



- 3 Press the **RETURN** Key. The search starts from the cursor position and the word initially located is displayed.

•If the words are not found in the text, "NOT FOUND!!" appears and the cursor position remains unchanged.

NOT FOUND !!



+



- 4 Each time you press the **N** Key while pressing the **CODE** Key, you can successively search for the same word.

To search for a different word, press the **S** Key while pressing the **CODE** Key, then re-input the new word.

•By pressing the **S** Key while pressing the **CODE** Key, the previously input word will be cleared.



+



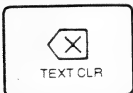
e. How to Clear Text



- 1 Press the **TEXT IN/OUT** Key, press the number corresponding to the file whose contents are to be cleared. Then, press the **RETURN** Key and select the margins.



+



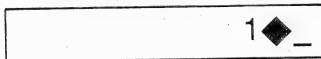
- 2 Press the Key while pressing the **CODE** Key. The following message appears on the LCD Display. (Check whether the contents are to be cleared or not.)

DELETE # 1 Y/N ?

(Display applies when file 1 has been selected.)



- 3 Press the **Y** Key to clear the text. The following display appears to indicate that there is no text in the file.



Press the **N** Key if you decide not to clear the text.



- 4 Press the **TEXT IN/OUT** Key to exit from the Text Memory Mode.

TEXT MODE END

f. Check of Remaining Memory



+



When the **M** Key is pressed while pressing the **CODE** Key in the Text Memory Mode, the amount of space left in the memory appears on the LCD Display.

256 CHR. LEFT

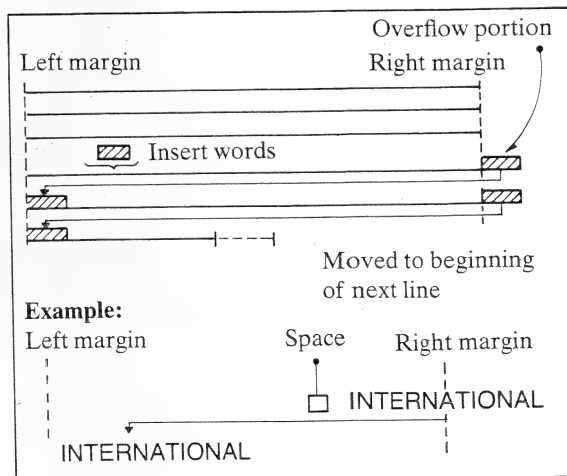
If you try to enter more characters when the memory is already full, the following message will appear and at the same time the buzzer will sound. The characters you entered are not accepted.

MEMORY FULL !!

TEXT MEMORY

g. Word-wrap

Word-wrap is a function applying when text is entered or when phrases are inserted. It automatically shifts a word which has gone beyond the right margin to the beginning of the next line. When the end of the next line goes beyond the right margin because of this movement, the same operation is automatically performed and it continues until there is no overflow. This function makes editing easier since words are positioned between the left and right margins without being split.



This unit can be used as a printer to print data received from a computer via the optional RP-K100 Interface Adaptor.

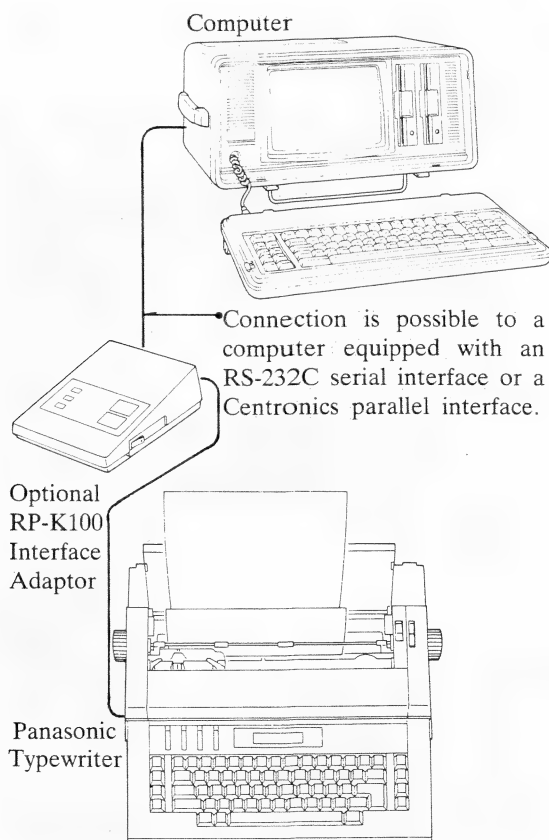
- When the Keyboard Selector is put in the "EXT" position, "EXT: ON LINE" will appear on the LCD Display.

The following two types of interface are available:

- **Serial (RS-232C)**
 - Transmission speed: 300 baud
 - Data length: 8 bits
 - Stop bit: 1 or 2 bits
 - Parity: None
- **Parallel (Centronics specifications)**

a. Connection to a Computer

- If your computer is equipped with a Centronics parallel interface, you will require the RP-K100 Interface Adaptor and a standard Centronics parallel interface cable. This cable can be purchased at many computer stores.
- If your computer is equipped with an RS-232C serial interface, you will require the RP-K100 Interface Adaptor and an RS-232C serial cable.
- If a different RS-232C serial interface is used, you may require a different cable than the one listed in the table.
- If your computer is not equipped with a Centronics parallel interface or an RS-232C serial interface then you will need to purchase one for your computer.
- Switch off the power before proceeding with the connections.
- Before connecting the computer, refer to the operating instructions for the RP-K100.



RS-232C Interface Cables (Optional Accessories)

Computer	RS-232C Serial Interface Card	Cable
Panasonic Sr. Partner RL-H7000	(built in)	RP-K110
Commodore 64	VIC1011A (Commodore) or equivalent	RP-K110
Apple II	Super Serial Card (Apple)	RP-K110
IBM PC	Asynchronous Adaptor Card (IBM)	RP-K111
Panasonic Exec. Partner	(built in)	RP-K111

- Turn on the unit's power before starting to transmit data from the computer via the RP-K100 Interface Adaptor.
- You can temporarily stop printing by pressing the **PRINT ON/OFF** Key on this unit. When the unit is not printing, the following indication will appear.

EXT : OFF LINE

- While data is being received by the Interface Adaptor, the Carriage automatically returns when it reaches the right margin. The paper advances one line and printing continues.
- If the unit's power is switched off and printing is forcibly stopped while data is being transmitted, the data will remain in the buffer memory of the RP-K100 Interface Adaptor. When printing is to be resumed, stop the transmission from the computer and turn off the power of the RP-K100 Interface Adaptor to clear the buffer memory.

b. Control Codes

Symbol	Code	Operation
BS	08H	Back Space
HT	09H	Tabulation
LF	0AH	Line Feed
CR	0DH	Carriage Return
ESC	1BH	Special functions in combination with the following code

Expansion Functions

ESC+"E" (1BH+45H) Bold ON
 ESC+"F" (1BH+46H) Bold OFF
 ESC+"G" (1BH+47H) Bold ON
 ESC+"H" (1BH+48H) Bold OFF
 ESC+"-" + 00H .. (1BH+2DH+00H) ... Underline OFF
 ESC+"-" + 01H .. (1BH+2DH+01H) ... Underline ON
 ESC+"-" + "0" .. (1BH+2DH+30H) ... Underline OFF
 ESC+"-" + "1" .. (1BH+2DH+31H) ... Underline ON

c. Auto Line Feed Operation

Automatic Line Feed can be selected by setting the Carriage Return Mode as shown below.

- **Automatic Carriage Return Mode** .. Auto Line Feed ON
- **Manual Carriage Return Mode** ... Auto Line Feed OFF

Code	Auto Line Feed ON	Auto Line Feed OFF
CR	Carriage Return, Line Feed	Carriage Return
LF	Carriage Return, Line Feed	Line Feed
CR+LF	Carriage Return, Line Feed	Carriage Return, Line Feed
LF+CR	Carriage Return, Line Feed	Carriage Return, Line Feed

PRINTER

d. Data Types**Printing Codes**

Input data from a computer is converted into the following characters and symbols.

Upper Lower	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0			Space	0	@	P	`	p			ß	ˆ	Ú	ù		
1			!	1	A	Q	a	q			½	Ä	á	^		
2			”	2	B	R	b	r			¼	Ë	é	Â		
3			#	3	C	S	c	s				Ï	í	Ê		
4			\$	4	D	T	d	t				Ö	ó	Î		
5			%	5	E	U	e	u				Ü	ú	Ô		ñ
6			&	6	F	V	f	v				ä	˘	Û		
7			,	7	G	W	g	w				ë	À	â		
8	BS		(8	H	X	h	x			ç	ï	È	ê		
9	HT)	9	I	Y	i	y				ö	Ì	î		˜
A	LF		*	:	J	Z	j	z			ı	ü	Ò	ô		Ã
B		ESC	+	;	K	Space	k	Space			ı	˘	Ù	û		Õ
C			,	Space	L	Space	l	Space			ç	Á	à			Ñ
D	CR		-	=	M	Space	m	Space			£	É	è			ã
E			.	Space	N	^	n	˘				Í	ì			õ
F			/	?	O	—	o					Ó	ò			

- For the five types of accent symbols (Codes, B0H, BBH, C6H, D1H, F9H) the carriage respectively stops at the printing position and moves after printing the next character.

5-1 CAUTIONS

a. Power Supply

Always grasp the plug when inserting into, or removing it from the AC Socket.
Never pull on the cord.

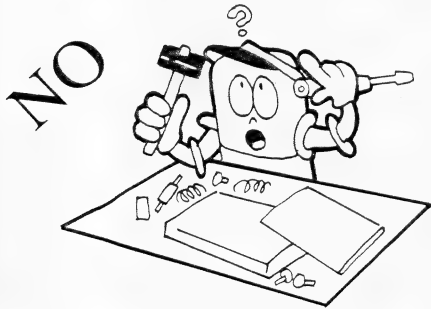
- Do not connect or disconnect with wet hands.
- Under no circumstances should the cord be pulled, twisted or extended.



b. Remodeling, Contact, etc.

Remodeling will cause breakdowns or failures.

- Electric shocks or other failures may occur if any of the inside parts are touched or if clips or other metal objects are inserted into the unit.



Do not place containers with water on top of the unit.

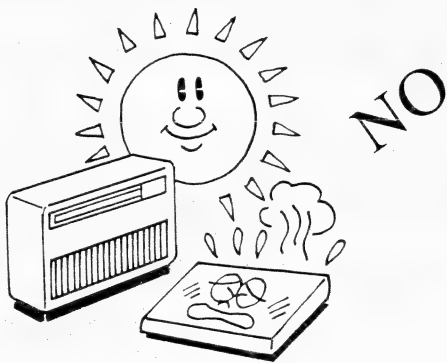
- This may cause a fire or electric shocks.



c. Locations for use

Do not use the unit in locations exposed to heavy dust or violent vibration.

- Avoid using the unit in locations exposed to direct sunlight or to high temperature or humidity levels.

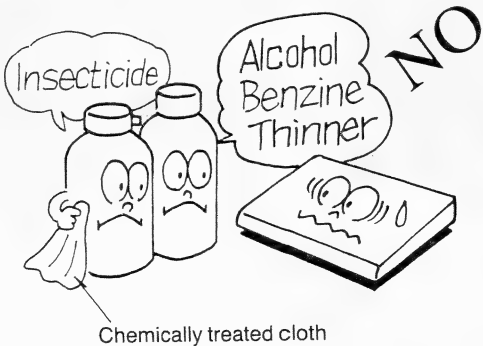


- Do not use the unit on a slant or at an angle.

d. Cleaning

Clean the case with a dry cloth. If badly stained, dip a cloth into water mixed with a small amount of detergent and remove the stains. Then wipe dry with a clean, dry cloth.

- Using Benzine, Thinners, Alcohol and Chemically treated cloth for cleaning or using Insecticide sprays near the unit may deform or discolor the unit.





5-2 OTHER

Appendix

a. Troubleshooting

•Check the points below before calling in a serviceman.

Symptom	Cause	Remedy/check	Reference page
No operation even when keys are pressed. Nothing appears on the LCD Display.	POWER Switch on "OFF".	Set the POWER Switch to "ON".	7
	"EXT" position.	Put the unit in the "KBI" or "KBII".	21
	The LCD Contrast Adjuster is set to low contrast.	Adjust the setting of the LCD Contrast Adjuster.	—
Unit does not print correctly, or printing is blurred.	Paper Release Lever is in Release position.	Push lever to Lock position.	13
	End of Ribbon Cassette or Correction Tape.	Replace with new Ribbon Cassette or Correction Tape.	10~12
No deletion even with  Key; blurred characters.	Correction Tape is not installed.	Install Correction Tape.	12
Buzzer sounds during typing and typing is disabled (keys do not function).	Carriage at right margin.	Press the RETURN Key and move the Carriage to next line.	—
		Press the MAR REL Key and continue printing on same line.	16
	Text Memory is full.	Re-edit the data or cancel the Text Memory Mode.	31
The main unit does not operate properly or the mechanism error buzzer sounds continuously.	Noise on the AC line or static electricity may prevent the main unit from operating properly.	All Reset Turn the POWER Switch "OFF" once, then back "ON" again. If the unit still does not function properly, press the TAB CLR Key and  Key simultaneously while pressing the CODE Key. At this time the Text Memory, Margin, Tab, etc., are all cleared.	—
When the buzzer sounds, a message will appear on the LCD Display, and the unit will cease to operate.	"CARRI. INIT ERR" appeared on the LCD Display.	Check to see if there is any foreign matter in the Carriage mechanism.	—
	"WHEEL INIT ERR" or "WHEEL STOP ERR" appeared on the LCD Display.	Check to see that the Cupwheel Print Element is installed.	8, 9
		Re-install the Cupwheel Print Element.	8, 9

Symptom	Cause	Remedy/check	Reference page
When the buzzer sounds, a message will appear on the LCD Display, and the unit will cease to operate.	"RIBBON INIT ERR" or "RIBBON STOP ERR" appeared on the LCD Display.	Re-install the Ribbon Cassette.	10, 11
		Replace the Ribbon Cassette with a new Cassette.	10, 11
	"PLATEN INIT ERR" or "PLATEN STOP ERR" appeared on the LCD Display.	Check to see if there is any foreign matter adhering to the platen.	—

ANY TIME YOU PLACE YOUR HANDS NEAR THE INSIDE OF THE UNIT MAKE SURE THAT THE POWER SWITCH IS IN THE "OFF" POSITION.

b. Optional Accessories

Cupwheel Printing Element

•COURIER10 RP-T153

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
1234567890

•PICA10 RP-T150

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
1234567890

•ELITE12 RP-T151

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
1234567890

•SCRIPT1012 RP-T152

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
1234567890

•GOTHIC15 RP-T154

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
1234567890

Ribbon Cassette

- Correctable Film Ribbon Cassette **RP-T132**
- Fabric Ribbon **RP-T142**

Correction Tape

- Lift-off Correction Tape (2 pcs) **RP-T131**
- Cover-up Correction Tape (2 pcs) **RP-T141**

Computer Interface Cable (RS-232C)

- RS-232C Interface Cable **RP-K110** [for Commodore 64, Apple II and Panasonic RL-H7000 (Sr. Partner)]
- RS-232C Interface Cable **RP-K111** (for IBM PC)

Interface Adaptor

- Parallel/Serial Interface Adaptor **RP-K100**

For Cupwheel Print Element, Ribbon Cassette, Correction Tape or Computer Interface Cable only, you can also contact your nearest Authorized Parts Distributor by calling.

1-800-447-4700 (Only in U.S.A.)

5-3 SPECIFICATIONS

Appendix

Printing Element	Cupwheel: 96 characters
Print Speed	11 characters/sec.
Print Pitch	10 characters/inch 101 characters/line 12 characters/inch 121 characters/line 15 characters/inch 151 characters/line
Line Spacing	1, 1½, 2
Paper Capacity	Max. 12 inches (304.8 mm)
Print Capacity	Max. 10 inches (254 mm)
Display	15-character LCD Display
Ribbon Cassette	Correctable Film Ribbon (Standard Accessory) Fabric Ribbon
Correction Tape	Lift-off Tape (Standard Accessory) Cover-up Tape
Keyboard	Character Key: 45 Keys Function Key: 21 Keys
Correction Memory	One line
Text Memory	Max. 7000 characters
Interface	RS-232C (Serial) and Centronics (Parallel) with optional Interface Adaptor RP-K100 (receive only)
Power Supply	AC: 120 V, 60 Hz
Power Consumption	36 W
Memory Protection	Lithium Battery (Built-in)
Operating Temperature	41°F~95°F (5°C~35°C)
Dimensions (W×H×D)	16.8"×3.5"×15.6" (426×90×396 mm)
Weight	12.1 lbs. (5.5 kg)

- Design and Specifications are subject to change without notice.

To locate an Authorized Servicenter in Your Area within the Continental U.S.A.

DIAL TOLL FREE: 1-800-447-4700
24 Hours a Day, 7 Days a Week

Requests for assistance in obtaining repairs or technical information...contact any one of the following Service Administration offices:

EASTERN

45 Hartz Way
Secaucus, NJ 07094
201-348-7460

MIDWEST

425 East Algonquin Road
Arlington Heights, IL 60005
312-981-4842

WESTERN

6550 Katella Avenue
Cypress, CA 90630
714-895-7438

SOUTHERN

1854 Shackle-Ford Court,
Suite 105
Norcross, GA 30093
404-925-6860

Correspondence requesting product information should be sent to:

Panasonic Consumer Affairs, Panasonic Company, Division of Matsushita Electric Corporation of America
1 Panasonic Way, Secaucus, NJ 07094.

Service in Puerto Rico
MATSUSHITA ELECTRIC OF PUERTO RICO, INC.
Panasonic Sales Company
Factory Servicenter
Calle Rosarito, Edif
D Ceramica Industrial Park
Carolina, Puerto Rico 00630
809-750-5135

Service in Hawaii
PANASONIC HAWAII, INC.
91-238 Kauhi Street, Ewa Beach
P.O. Box 774
Honolulu, Hawaii 96808-0774
808-682-1521

Panasonic

Technics

RAMSA

Your product is designed and manufactured to ensure a minimum of maintenance. However, should your unit ever require service, a nationwide system of FACTORY SERVICENTERS and AUTHORIZED INDEPENDENT SERVICENTERS is maintained to support your product's warranty.

Service in the Continental U.S.A. ...
Factory Servicenters

MATSUSHITA SERVICES COMPANY

Division of Matsushita Electric Corporation of America
50 Meadowland Parkway, Secaucus, New Jersey 07094

ALABAMA

2523-5th Avenue, South
Birmingham, AL 35233
205-252-4195

ARIZONA

2121 Priest Drive, South
Suite 107
Tempe, AZ 85282
602-968-8645

CALIFORNIA

6550 Katella Avenue
Cypress, CA 90630
714-895-7425
930 South Mt. Vernon Drive
Colton, CA 92324
714-825-3110
260 Visitacion Mall
Brisbane, CA 94005
415-467-6860
20201 Sherman Way
Suite 102
Canoga Park, CA 91306
818-709-1775
3012 Gold Canal Drive
Rancho Cordova, CA 95670
916-638-4357

Viewridge Research Park
4830 Viewridge Avenue
San Diego, CA 92123
619-560-9200

COLORADO

14401 E. 33rd Place
Suite E
Aurora, CO 80011
303-371-6968

FLORIDA

16175 NW 52nd Avenue
Miami, FL 33014
305-624-6521
4101 N. Dixie Highway
Oakland Park, FL 33334
305-563-5847
208 Volusia Avenue
Daytona Beach, FL 32014
904-258-8512
4115 W. Kennedy Boulevard
Tampa, FL 33609
813-872-2686
GEORGIA
1575 Northside Drive
Suite 325 Atlanta, GA 30318
404-351-8978

4245 International Blvd.
Suite C
Norcross, GA 30093
404-925-6880

ILLINOIS

425 E. Algonquin Road
Arlington Heights, IL 60005
312-981-4840
2100 Mannheim Road
Northlake, IL 60164
312-681-2060

INDIANA

7025 Kensington Drive
Indianapolis, IN 46226
317-542-7730

MARYLAND

8711 Liberty Plaza Mall
Randallstown, MD 21133
301-655-0300

MASSACHUSETTS

101 University Avenue
Westwood, MA 02090
617-329-4280
151 Andover Street
Danvers, MA 01923
617-774-4356

MICHIGAN

1270-A Rankin Street
Troy, MI 48064
313-585-8666

MINNESOTA

7860-12th Avenue, South
Airport Business Center
Bloomington, MN 55420
612-854-8624

MISSOURI

10212 St. Charles Rock Road
St. Ann, MO 63074
314-423-1900

NEW JERSEY

45 Hartz Way
Secaucus, NJ 07094
201-392-6000

OHIO

494 Northland Boulevard
Cincinnati, OH 45240
513-851-4180

PENNSYLVANIA

8362-80 State Road
Philadelphia, PA 19136
215-332-5550

4986 Library Road, Rt. 88
Hillcrest Shopping Center
Bethel Park, PA 15102
412-343-0555

TENNESSEE

925-8th Avenue, South
Nashville, TN 37203
615-244-4434

TEXAS

7420 Harwin Drive
Houston, TX 77036
713-781-1528
10613 Sentinel Drive
San Antonio, TX 78217
512-654-6677
1825 Walnut Hill Lane
Irving, TX 75062
214-659-1770

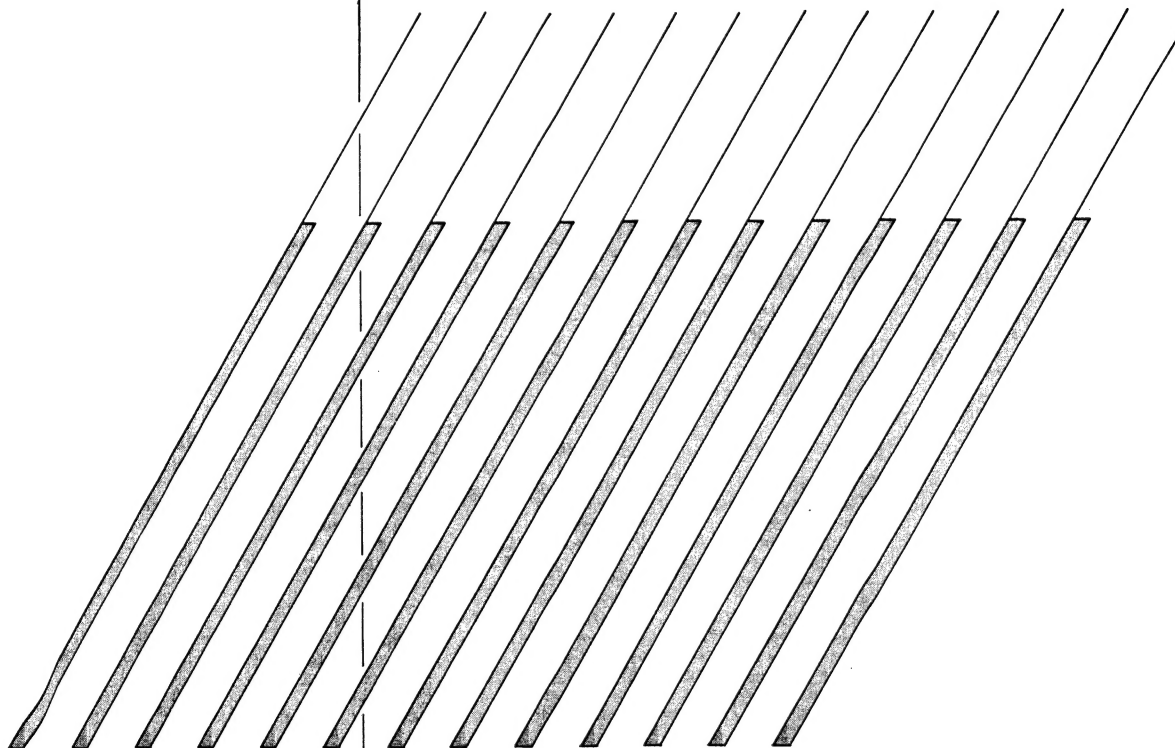
WASHINGTON

4060 Lind Avenue, SW
Renton, WA 98055
206-251-8283

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New Jersey 07094

Panasonic Hawaii, Inc.
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Honolulu, Hawaii 96808-0774

Panasonic Sales Company
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Ave. 65 De Infanteria, KM 9.7
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Carolina, Puerto Rico 00630



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